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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,466	02/22/2000	David R. Brown	M3477.0000/P011	2426
24998	7590	03/16/2004	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			NGUYEN, THONG Q	
2101 L STREET NW			ART UNIT	
WASHINGTON, DC 20037-1526			PAPER NUMBER	
			2872	
DATE MAILED: 03/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/507,466

Applicant(s)

BROWN, DAVID R.

Examiner

Thong Q. Nguyen

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2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/24/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/24/2003 has been entered.

Response to Amendment

2. The present Office action is made in response to the amendment filed on 11/24/2003. It is noted that in the mentioned amendment, applicant has made amendments to claims 1-3 and 9. The pending claims 1-3, 6-10 and 12-18 are examined in this Office action.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Each of claims 1 and 9 recites an optical device having a substrate with a smooth regularly shaped exterior surface and an irregularly shaped exterior output surface. While such a structure is supported by the drawings; however, the specification has not positively provided support for the mentioned features claimed in the claims. Applicant should amend the specification to provide a positively support for the feature claimed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Claim 1 is rejected under 35 USC 112, second paragraph because the feature thereof "said first optical element is of a first shape, said second optical element is of a second shape different from said second shape" (lines 20-21) is indefinite. How can a shape is different from itself? Should "second" (line 21, second occurrence) be changed to –first— to make clear the feature claimed?
- b) The remaining claims are dependent upon the rejected base claim and thus inherit the deficiency thereof.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-3 and 8-10, are rejected under 35 U.S.C. 102(b) as being anticipated by Chahroudi (U.S. Patent No. 5,198,922, of record).

Chahroudi discloses an optical system having three optical components (1-3). The optical system is subjected to receive light from a light source so that the light is splitted into transmissive light or reflective light dependent upon the operation of the optical component (1) disposed between the other two optical components (2, 3). In

particular, the optical system (10) comprises a first component (3) having a smooth regularly shaped exterior surface for receiving light entering the first component and an irregularly shaped exterior output surface for emitting light out of the first component; a shutter (1) having both roughed entrance and emitted surface; and a second component (2) having an irregularly shaped exterior surface for receiving light entering the second component after the light passed through the shutter, and a smooth regularly shaped exterior output surface for emitting light out of the second component. The irregularly shaped exterior surface of each components (2, 3) comprises a pattern of microwedged elements which each is a non-textured and substantially planar shape wherein light transmits through them will change the directions. The microwedged elements formed in each irregularly shaped exterior surfaces have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a first microwedged element will direct/guide in an optical path which is different from the optical path of another beam passing through a second microwedged element located adjacent to the first microwedged element. With regard to the feature that the first and second microwedged shaped elements formed by shaping a same substrate, it is noted that the plurality of microwedged elements of each optical components (2 or 3) are formed on the same substrate. See the surface of the optical component (3) shown in figure 2, for example. Regard to the method of manner in which the projections are formed on the substrate, i.e., shaping as recited in the claim, it is noted that a method step in an apparatus is not germane to the issue of patentability of device itself; therefore, the limitation of the method step has not been given patentable weight. As

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such, in comparison the optical component (3) with the optical device as claimed in the present claims, the optical component (3) with the microwedged shaped pattern formed on the exterior surface of the component provided by Chahrودي meets all of the limitations recited in the present claims.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-2, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco (U.S. Patent No. 5,861,990, of record) in view of Chahrودي (U.S. Patent No. 5,198,922, of record).

Tedesco discloses an optical device for receiving light from a light source so that the light outputting from the device is a diffusing light. The device (102) comprises a light entrance surface (104) and an output/exit light surface (106) wherein a pattern of microwedged projections are formed. The microwedged projections have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a microwedged projection will direct/guide in an optical path which is different from the optical path of another beam passing through other microwedged projection. As such, light reflected from two adjacent microwedged projections will provide respectively non-adjacent portions of a pattern. See Tedesco, columns 3-4 and fig. 1, for example. It is noted that Tedesco does not disclose that each projections comprises planar surfaces as recited in the present claims 1 and 9. However, the feature concerning the planar shape of the output surface of the

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projections as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification at page 12 and shown in figure 6 in which applicant has admitted that the output surface of the projections are curved surface. Furthermore, the concept of making a surface having a pattern formed thereon wherein the pattern comprises a set of smooth projections or irregularly/roughed projections are clearly suggested to one skilled in the art as can be seen in the optical system provided by Chahroudi. In particular, Chahroudi discloses two embodiments in which the pattern has a smooth elements (see the first embodiment shown in figure 1) or the pattern has a roughed/irregular elements of planar surfaces (see the second embodiment shown in figure 2). Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the optical element provided by Tedesco by using a texture surface constituting by roughed/irregular structure of planar surfaces as suggested by Chahroudi for the purpose of improving the optical performance and meeting a particular design.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco in view of Chahroudi as applied to claim 1 above, and further in view of Hoch et al (U.S. Patent No, 6,002,520, of record).

The combined product as provided by Tedesco and Chahroudi meets all of the device as claimed in present claim 6 except the feature of a lens for performing a Fourier transform operation and/or for modifying an incident light beam (Note: claim 7 does not provide any specific limitation for the so-called "modifying of incident light beam"). However, the use of a diffusing element in a system having a light source, a

lens and a diffusing element is clearly disclosed in the art as can be seen in the optical system provided by Hoch et al. See columns 2-5 and figs. 1-4. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize/apply the diffusing device provided by Tedesco and Chahroudi in an optical system having a lens disposed in front of the diffusing device as suggested by Hoch et al so that the lens will perform a Fourier transform operation of the light before it enters the diffusing element.

Allowable Subject Matter

11. Claims 12-18 are allowed over the cited art.

Response to Arguments

12. Applicant's arguments filed on 11/24/2003 have been fully considered but they are not persuasive.

First, regarding to the rejection of claims 1-3 and 8-10 under 35 USC 102(b) over the art of Chahroudi, applicant has argued that the device provided by Chahroudi has different features from the device claimed. See amendment, pages 6-7. In particular, applicant has argued that the device of Chahroudi does not have both first and second optical elements are formed on the same irregular shaped surface as claimed; and the optical device provided by Chahroudi has two substrates. The Examiner respectfully disagrees with the applicant's opinion and respectfully invited the applicant to review the inventive device as disclosed in the present application. The Examiner is of opinion that the first and second optical elements formed on the same irregularly shaped surface as claimed are directed to the microwedged shaped formed on one surface of the substrate, and in this aspect then the formation of the microwedged elements on the

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output surface of the substrate (3) as provided by Chahroudi is clearly met the requirement relating to the structure of the device claimed. Applicant is also invited to review the rejection which is modified in this Office action in which the component (3) is the only component used to reject the present claims because it is an optical component having a substrate wherein one side is a planar incident surface in which the light incident thereon, and the other side is an exterior (or exit) surface wherein a pattern of microwedged elements are formed thereon. The manner in which the exterior surface being located with respect to other optical elements in the device provided by Chahroudi is not brought into consideration because the exterior surface of the component (3) still acts as an exterior surface of the optical component (3) with respect to the light (7).

Second, regarding to the rejection of claims 1-2 and 8-10 under 35 USC 103(a) over the art of Tedesco and Chahroudi, applicant's arguments provided in the amendment, pages 7-8, have been fully considered but they are not persuasive. Applicant argued that Tedesco does not disclose that the exterior surface of his component having substantially planar microwedges. While the examiner has agreed to applicant's statements concerning the structure of the component provided by Tedesco; however, the claims were not being rejected under the art of Tedesco by itself. The claims were rejected under 35 USC 103(a) over the combination of teachings provided by Tedesco and Chahroudi. Applicant is respectfully invited to review the rejection as set forth in the previous Office action and is modified in this Office action.

Third, regarding to the rejection of claims 6-7 under the combination of teachings provided by Tedesco, Chahroudi and Hoch, since applicant has failed to provide any specific arguments; therefore, the claims are still rejected for the same reasons as set forth in the paragraph 10) of this Office action.

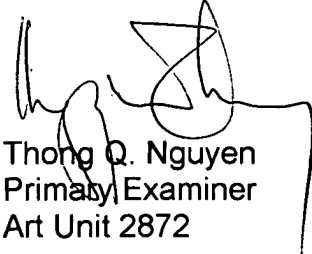
Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
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